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# MSPC Advisory Circular

ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF AIR PROGRAMS • MOBILE SOURCE POLLUTION CONTROL PROGRAM

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A/C No. 24

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Subject: Prohibition of use of Emission Control Defeat Devices

## A. Purpose

The purpose of this Advisory Circular is to notify manufacturers that EPA will refuse to certify vehicles equipped with emission control defeat devices and to inform manufacturers as to the authority and criteria for any such refusal by EPA. The Circular also applies the policy set forth to the approval of running changes and field fixes involving the addition of Defeat Devices to vehicles.

## B. Background

1. In a letter of July 12, 1972, the Administrator notified all manufacturers of light duty motor vehicles that the Agency considers sensors and devices which may adversely affect emission control under conditions or during operations likely to occur in actual vehicle use to be inconsistent with the intent of the Clean Air Act. Specifically, it is the intent of the Act that vehicles be designed, built, and equipped so that when they are being used by the motoring public emissions will be reduced to the extent indicated by the prescribed standards during the period of their useful life. The fact that it may not be practicable to test prototype or production vehicles in order to assure the reductions under many conditions which the vehicle will encounter does not mean intentional obviation of these reductions outside the parameters of the test procedure is consistent with the Act.

2. The "intent of the Clean Air Act" referred to in the letter has in part been implemented by regulations as regards test vehicles. Paragraph 85.073-9(d) requires that all emission control systems "shall be functioning" during the Federal Test Procedure. Paragraphs 85.073-7(a) and (b) provide that emission data vehicles and durability data vehicles, respectively, "shall be driven...with all emissions control systems installed and operating..." during all mileage accumulation. These provisions are in the regulations to insure that emissions control systems and devices which operate to achieve emissions reductions during emission tests operate similarly during mileage accumulation so that their ability to achieve similar emission reductions during normal use for five years or 50,000 miles may be reasonably assessed.

Devices which are designed to compromise the emission control effectiveness of any system during mileage accumulation as compared with effectiveness during emission testing are inconsistent with the letter and purpose of the test procedures. Hence, EPA cannot certify test vehicles employing such devices.

C. Applicability

The policy outlined in this Advisory Circular is effective and applicable immediately. The provisions of this Advisory Circular apply to certification testing beginning with the 1974 model year and to running changes and field fixes which would involve the addition of any Auxiliary Emission Control Device (AECD) on any model year vehicle.

D. Definitions

1. Auxiliary Emission Control Device (AECD). An AECD is any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system.

2. Defeat Device. A Defeat Device is an AECD that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal urban vehicle operation and use, unless (1) such conditions are substantially included in the Federal emission test procedure, or (2) the need for the AECD is justified in terms of protecting the vehicle against damage or accident, or (3) the AECD does not go beyond the requirements of engine starting.

E. Criteria for Determining the Acceptability of Certain AECDs

1. An AECD is generally deemed to be a Defeat Device if it is determined by EPA to reduce the effectiveness of an emission control system:

a. In response to any ambient, underhood or passenger compartment air temperature outside the 68°- 86° F range;

b. In response to any accessory operating condition not encountered during the Federal emission test;

c. After any time span in a specific vehicle operating mode.

2. AECDs that generally are acceptable include those which reduce the effectiveness of an emission control system in response to:

a. Engine temperatures (as sensed by oil or coolant temperature or some other direct indicator) which are outside the range of normal, stabilized operating temperatures;

b. Unusual engine, emission control system, or vehicle operating conditions which may reasonably be expected to cause damage or destruction to the engine or vehicle;

c. Unusual engine, emission control system, or vehicle operating conditions which may reasonably be expected to present a safety problem;

d. The engagement of the transmission gear, as long as no time delay is employed.

F. Determination of Acceptability of Specific Devices

1. All AECDS must be described in the manufacturer's application for certification. Based upon the description of the device, data derived from such testing as EPA may require or conduct, and any showings made by the manufacturer, EPA will determine whether the device is acceptable or whether it is a Defeat Device.

2. The categories in Section E. above, are illustrative only. Therefore, the acceptability of each device will be determined on an individual basis since some devices may not fit into one of the categories in Section E. above, others are difficult to categorize, and still others may have more than one purpose. If the device is determined to be a Defeat Device, EPA will advise the manufacturer in writing that test vehicles incorporating such a device are not eligible to provide data on the basis of which certification may be issued.

3. The policy stated herein will also be applied with respect to determinations by EPA under 40 CFR 85.073-33 and 34 (running changes), and approvals under 40 CFR 85.073-5(f) (carry-over data).

4. Any 1974 model year vehicle which has begun mileage accumulation with a Defeat Device installed and operating is disallowed, unless the manufacturer can show that such operation cannot reasonably be concluded to have an impact on the deterioration of the emission control system.

G. Use of Carry-over Data

If, in accordance with Advisory Circular No. 17, a manufacturer has proposed the use of carry-over data for 1974, such data will be accepted to the extent that the data did not originate from vehicles equipped with Defeat Devices. If Defeat Devices were used on 1973 model year durability vehicles to generate data intended to be used as the basis for 1974 model year certification, testing of 1974 model year durability vehicles which do not contain such devices may be required, depending upon EPA's judgment whether the use of the device may reasonably be expected to have affected deterioration of the 1973 vehicle.

If Defeat Devices were used on 1973 model year emission data vehicles to generate data intended to be used as the basis for 1974 model year certification, testing of 1974 model year emission data vehicles which do not contain such devices will be required.

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